Sprint
Together with NEXTEL

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May 24, 2007

BY ELECTRONIC FILING

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
The Portals
445 Twelfth Street, S.W.
Washington, D.C. 20554

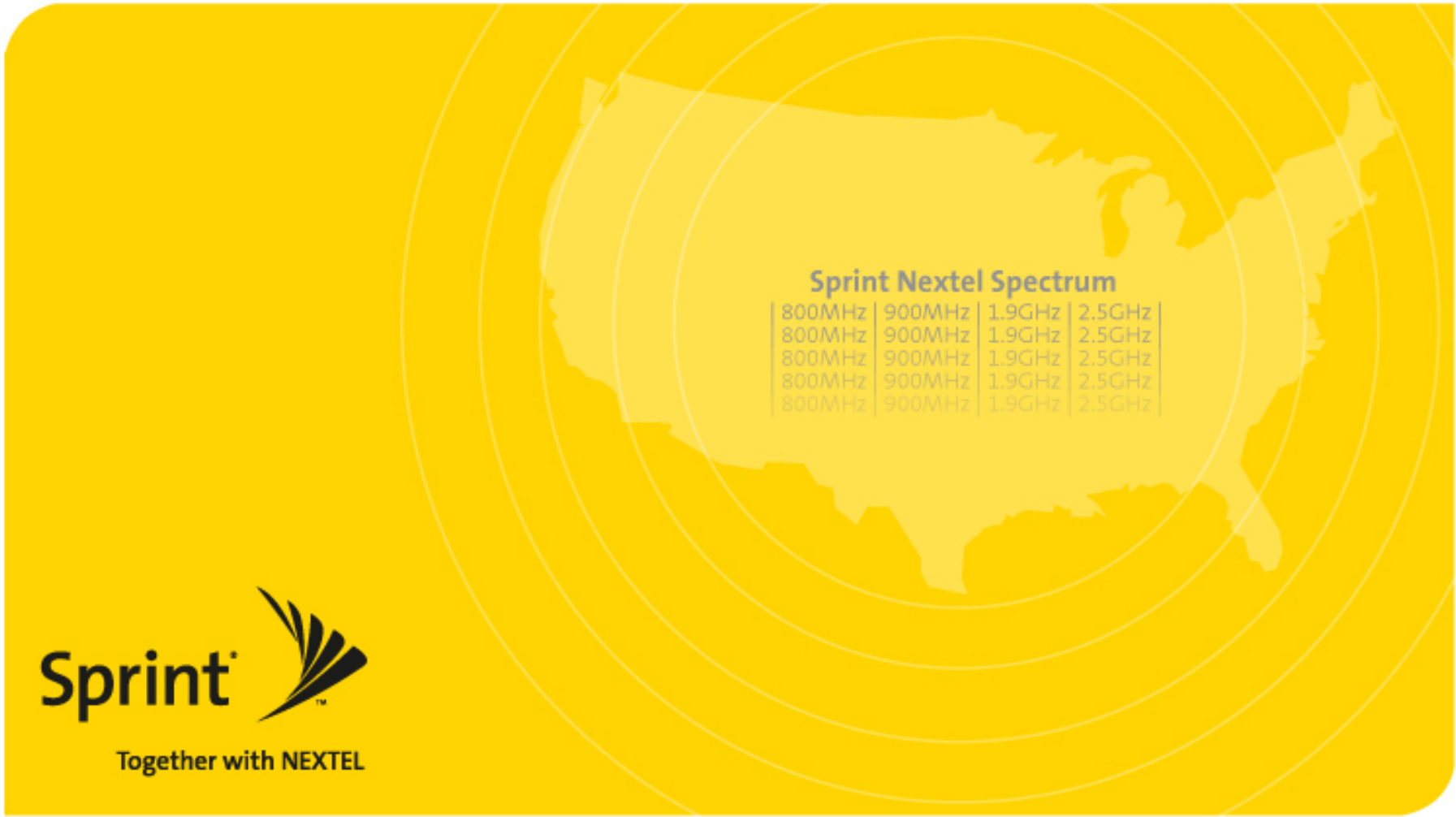
Re: Unlicensed Operation in the TV Broadcast Bands, ET Docket Nos. 04-186, 02-380

Dear Ms. Dortch:

Yesterday Richard Engelman and I from Sprint Nextel Corporation met with representatives from the Federal Communications Commission's Office of Engineering and Technology (OET). Attending on behalf of OET were Alan Stillwell; Geraldine Matise; Hugh Van Tuyl; Mark Settle; Julius Knapp; Ron Chase; Ahmed Lahjouji; Harry Wong; Saurbh Chhabra; Rashmi Dashi; William Huast. We reviewed the attached presentation. Please associate this submission with the above-referenced docket.

Sincerely,

Trey Hanbury, Esq.
Director, Sprint Nextel Corporation



Optimizing the Use of TV White Space

May 23, 2007

Overview

- TV “white space” presents a considerable amount of spectrum that can be used to promote wireless broadband deployment.

- In offering TV broadcast frequencies to the public for use, the Commission should take necessary measures to ensure that

  > the public is fully compensated for the use of this valuable and scarce public resource;
  > the spectrum is allocated to its highest and best use; and
  > incumbent operations are protected from harmful interference.

RECOMMENDATION:
Auction and license available TV white space exclusively for fixed operations

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Benefits of Licensed, Fixed Operations

- **Spectrum at 700 MHz and lower frequencies have propagation characteristics that are more suitable for a licensed approach**
  - > Unlicensed operations have been most successful when the distance at which interference can occur is limited. 700 MHz and lower frequencies have longer propagation distances, which would render sharing between unlicensed devices more difficult.
  - > Interference between devices would be greater than in other bands

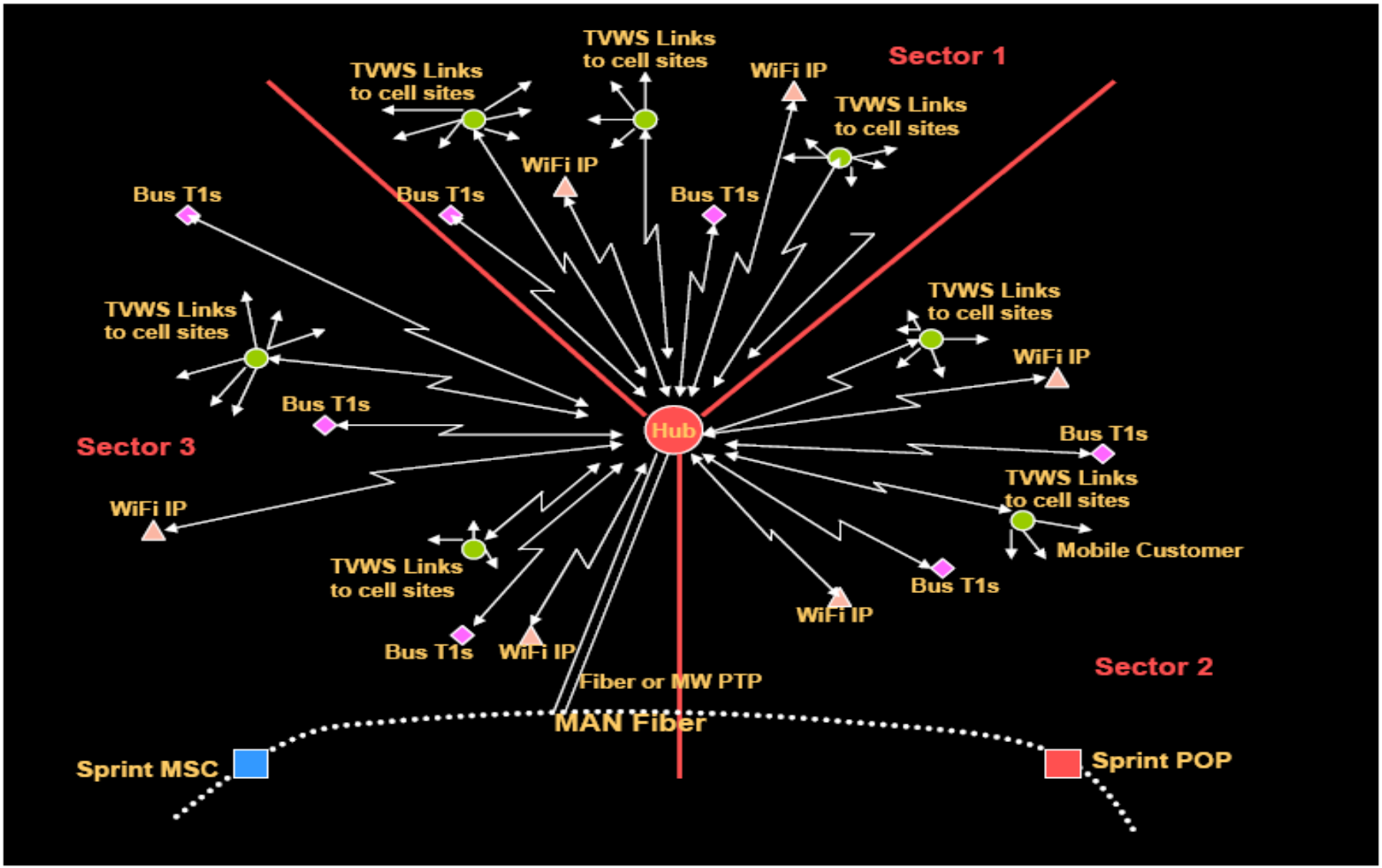
- **A licensed approach affords greater protections to incumbent operations**
  - > Licensed, fixed point-to-point and point-to-multipoint systems can be easily designed to protect broadcasters and other incumbents, such as wireless microphone systems, from harmful interference.
  - > In the event there is harmful interference, broadcasters can identify the source of interference and will know whom to contact to redress the issue promptly. Licensing the TV white spaces ensures accountability and the ability to effectively enforce the FCC's rules – benefits that would not be afforded in an unlicensed regime.
  - > No need to rely on unproven, potentially complex technology to avoid interference from mobile or unlicensed fixed devices

- **A licensed approach encourages greater investment in technologies and services**
  - > Avoids "tragedy of the commons"
  - > Licensing and the development of clear interference and service rules will yield regulatory certainty and a predictable spectrum environment, two factors that are vital to investment in the TV white space bands. Licensees could take necessary steps to design a system that comports with FCC rules and, in return, receive assurance that their investments would be protected.

Benefits of Licensed, Fixed Operations

- **Optimally, the Commission should allocate *all* available TV white space for licensed, fixed point-to-point and point-to-multipoint services such as wireless backhaul.**
  - > The TV white space frequencies provide an ideal opportunity to address the critical and growing need for backhaul spectrum.
  - > As service providers develop and expand their broadband wireless offerings, the need for additional backhaul will increase substantially.
- **Providing a viable backhaul alternative will promote *competitive* wireless broadband deployment**
  - > Although broadband deployment is progressing, the deployment of competitive broadband is hampered by monopolies over a majority of special access lines.
  - > Sprint Nextel currently uses special access lines purchased almost exclusively from ILECs for its backhaul. Unfortunately, alternative technologies, such as fixed wireless or a cable-provided circuit, rarely meet Sprint Nextel's service requirements. Because competitive alternatives for special access are very limited, ILECs can charge supra-competitive prices.
  - > Providing a new potential competitive backhaul alternatives will allow competitors to invest in their networks and service offerings, not in other carriers.

TV White Space
Network Architecture



Competitive Bidding Will Ensure Efficient Use of TV White Space

- **FCC should auction available TV white space**
  - > Spectrum at these frequencies, even "Swiss cheese" TV White Space spectrum, has excellent propagation characteristics and is considerably valuable.
  - > Licensing TV white space through competitive bidding will ensure that the American people benefit from the use of this resource. Moreover, market incentives will promote the highest and best use of available TV white space.
  - > Auction could be conducted now since fixed technology is readily available and demand for backhaul spectrum is growing.
  - > The Commission should promote participation by a variety of market entrants by auctioning the spectrum in 2x6-megahertz channel blocks.
- **If the Commission remains committed to permitting unlicensed operations in the TV white spaces, it should set aside a portion of the spectrum for future use, <u>after unlicensed technologies and interference-avoidance mechanisms are fully mature and adequately tested</u>.**